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EXAMINER

AKHAVANNIK, HUSSEIN

ART UNIT PAPER NUMBER

2621

DATE MAILED: 11/20/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/785,433

Applicant(s)

HYAKUTAKE ET AL.

Examiner

Hussein Akhavannik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-78 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-5,7-9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code on page 17, line 14. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.
2. The status of U.S. Patent Application No. 09/648,965 should be updated on page 2 of the specification to identify any publications of the application.

Drawings

3. New corrected drawings are required in this application because figures 4-10 have informal reference numbers and figure 6 is informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-4, 6-12, 15-18, 20-23, 25-31, 34-37, 39-42, 44-50, 53-56, 58-63, 65-70, and 72-77 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhao et al (U.S. Patent No. 6,141,753).

Referring to claim 20, which is representative of claims 1 and 39,

- i. Means for receiving a request from a remote user is explained by Zhao et al in column 6, lines 34-36. The copy client (remote user) makes the request to the copy server.
- ii. Means for selecting an application service provider based on the request is explained by Zhao et al in column 6, lines 50-54. The application service provider selected corresponds to the chosen the copy server 103(j). Zhao et al explain that multiple copy servers are available in column 3, lines 24-26.
- iii. Means for forwarding the request to the application service provider is illustrated by Zhao et al in figure 1 by NWREQ (147).
- iv. Means for receiving information from the application service provider indicating information of a document provided from the application service provider to the user is illustrated by Zhao et al in figure 1 by FRESP (145) and explained in column 6, line 60 to column 7, line 13.
- v. Means for sending a merge command to a printing entity requesting that the document be printed with watermark information is explained by Zhao et al in column 6, lines 44-49. One kind of use for the digital representation of the work is explained to be printing in the copy client. Zhao et al explain that the digital representation may contain a fingerprint watermark to identify the user when it is sent from the copy server to the

copy client in column 7, lines 1-13. Zhao et al further explain that the fingerprint watermark remains in the digital representation as long as it is present in the copy client in column 8, lines 1-3. Thus, if the fingerprint watermark is present in the digital representation, then the representation will be printed with the watermark by the copy client.

Referring to claim 21, which is representative of claims 2 and 40, a means for transmitting the watermark information to the printing entity is explained by Zhao et al in column 7, lines 11-22. Zhao et al explain that the encrypted digital representation, the encrypted keys, and the encrypted use information are sent to the copy client. Zhao et al then explain that the second encryption key sent to the copy client may be used as the identifying information in the fingerprint watermark. Thus, the watermark information is sent to the printing entity (corresponding to the copy client).

Referring to claim 22, which is representative of claims 3 and 41, a means for checking whether the watermark is received is explained by Zhao et al in column 8, lines 4-5 by the watermark reader (123) of the copy client. The sending of the merge command being based on the watermark command being received is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark is present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can perform many functions including displaying or printing a digital representation in column 6, lines 44-47. Thus, if the watermark is determined to be present in a digital representation, then a merge command will be sent and the representation will be displayed (or printed) with the watermark by the copy client.

Referring to claim 23, which is representative of claims 4 and 42, a means for checking whether a document has been tagged is explained by Zhao et al in column 8, lines 4-5 by the watermark (corresponding to a tag) reader (123) of the copy client. The sending of the merge command being based on the document being tagged is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark (tag) is present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can perform many functions including displaying or printing a digital representation in column 6, lines 44-47. Thus, if the watermark (tag) is determined to be present in a digital representation, then a merge command will be sent and the representation will be displayed (or printed) with the watermark by the copy client.

Referring to claim 25, which is representative of claims 6 and 44, a means for retrieving a document from an application service provider is illustrated by Zhao et al in figure 1 by the copy server 103(j) and the work storage 105. The copy server will extract a document from the work storage in order to forward it to the copy client 119(j).

Referring to claim 26, which is representative of claims 7 and 45, a means for transmitting the document and the watermark information to the printing entity is explained by Zhao et al in column 7, lines 1-5. Zhao et al explains that the original representation is embedded with a watermark before it is transmitted to the copy client (printing entity).

Referring to claim 27, which is representative of claims 8 and 46, a means for retrieving the watermark from the application service provider is explained by Zhao et al in column 8, lines 4-5 by the watermark reader which reads (or retrieves) the public watermark embedded in the original representation.

Referring to claim 28, which is representative of claims 9 and 47, a means for retrieving a document and at least part of the watermark information from the user is illustrated by Zhao et al by the copy server 103(j). Zhao et al explain in column 6, lines 1-7 and illustrate in figure 1 by the NWREQ signal (147) that the NWREQ signal contains the original digital representation of the document, which is received by the copy server. Zhao et al further explain that the copy client 119(j) may perform the watermarking of the document and can then transmit the watermarked document to the copy server in column 8, lines 58-65. Therefore, the copy server will retrieve the document and the watermark from the copy client.

Referring to claim 29, which is representative of claims 10 and 48, a means for transmitting the document and at least a portion of the watermark information to an application service provider corresponds to claims 28, 9, and 47. Zhao et al explain that the document and at least a portion of the watermark (embedded within the document) are transmitted to and received by the copy server (which corresponds to the application service provider).

Referring to claim 30, which is representative of claims 11 and 49, a means for transmitting the request to a document manager including the means for receiving the request is illustrated by Zhao et al in figure 1 by the NWREQ signal (147) and the transaction manager (115) on the copy server (corresponding to the document manager). The means for selecting the application service provider is explained by Zhao et al in column 6, lines 50-54. The application service provider selected corresponds to the chosen the copy server 103(j). The means for forwarding the request is illustrated by Zhao et al in figure 1 by the FRESP signal (145), which contains the encrypted digital representation. The means for receiving the information from the application service provider is illustrated by Zhao et al in figure 1 by the Encrypter/decrypter

(120) of the copy client. The means for sending the merge command is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark is present (as detected by the watermarker/watermark reader of the copy client), then it will be displayed by the copy client. Thus, if the watermark is determined to be present in a digital representation, then a merge command will be sent and the representation will be displayed (or printed) with the watermark by the copy client.

Referring to claim 31, which is representative of claims 12 and 50, transmitting at least a portion of the watermark information to the document manager is explained by Zhao et al in column 3, lines 38-58. Zhao et al illustrate in figure 2 that the watermarked originals received by the copy server (corresponding to the document manager) contain at least one public watermark (203) and one owner identification watermark (205(1)).

Referring to claim 34, which is representative of claims 15 and 53, receiving the document from the document manager is illustrated by Zhao et al in figure 1 by the FRESP signal (145). Zhao et al explain that the FRESP contains the encrypted digital representation in column 7, lines 11-13.

Referring to claim 35, which is representative of claims 16 and 54, receiving the watermark information from the document manager is illustrated by Zhao et al in figure 1 by the FRESP signal (145). Zhao et al explain that the FRESP contains the encrypted digital representation in column 7, lines 11-13 and further explain that the digital representation is embedded with a watermark before it is encrypted in column 7, lines 1-4.

Referring to claim 36, which is representative of claims 17 and 55, merging the document with the watermark information is explained by Zhao et al in column 8, lines 5-9. Zhao et al

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explain that if the watermark is present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can perform many functions including displaying or printing a digital representation in column 6, lines 44-47. Thus, if the watermark (tag) is determined to be present in a digital representation, then the representation will be displayed (or printed) with the watermark by the copy client.

Referring to claim 37, which is representative of claims 18 and 56, printing the document with the watermark is explained by Zhao et al in column 6, lines 44-47. Zhao et al explain that the uses for the digital representation include displaying, printing, copying, or playing.

Referring to claim 65, which is representative of claims 58 and 72,

- i. Means for receiving a request from a remote user is explained by Zhao et al in column 6, lines 34-36. The copy client (remote user) makes the request to the copy server.
- ii. Means for selecting an application service provider based on the request is explained by Zhao et al in column 6, lines 50-54. The application service provider selected corresponds to the chosen the copy server 103(j). Zhao et al explain that multiple copy servers are available in column 3, lines 24-26.
- iii. Means for retrieving a document is illustrated by Zhao et al in figure 1 by the copy server 103(j) and the work storage 105. The copy server will extract a document from the work storage in order to forward it to the copy client 119(j).
- iv. Means for merging a document with watermark information is illustrated by Zhao et al in figure 1 by the watermarker/watermark reader 109 of the copy server 103(j).

v. Means for transmitting the document merged with the watermark information to the printing entity is explained by Zhao et al in column 6, lines 44-49. One kind of use for the digital representation of the work is explained to be printing in the copy client. Zhao et al explain that the digital representation may contain a fingerprint watermark to identify the user when it is sent from the copy server to the copy client in column 7, lines 1-13. Zhao et al further explain that the fingerprint watermark remains in the digital representation as long as it is present in the copy client in column 8, lines 1-3. Thus, if the fingerprint watermark is present in the digital representation (by being embedded by the watermarker/watermark reader 109), then the representation will be printed with the watermark by the copy client.

Referring to claim 66, which is representative of claims 59 and 73, retrieving the document from the remote user is illustrated by Zhao et al by the copy server 103(j). Zhao et al explain in column 6, lines 1-7 and illustrate in figure 1 by the NWREQ signal (147) that the NWREQ signal contains the original digital representation of the document, which is received by the copy server.

Referring to claim 67, which is representative of claims 60 and 74, retrieving the document from the application service provider is illustrated by Zhao et al in figure 1 by the FRESP signal 145 with contains the encrypted copy of the digital representation, which is retrieved by the encrypter/decrypter 120 of the copy client 119(j).

Referring to claim 68, which is representative of claims 61 and 75, retrieving the watermark information from the application service provider is provider is explained by Zhao et

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al in column 8, lines 4-5 by the watermark reader which reads (or retrieves) the public watermark embedded in the original representation by the copy server 103(j).

Referring to claim 69, which is representative of claims 62 and 76, retrieving the watermark information from the remote user is explained by Zhao et al in column 8, lines 58-65. Zhao et al explain that the copy client 119(j) may perform the watermarking of the digital representation and then transmit the watermarked document to the copy server, thereby allowing the copy server to retrieve the watermark information from the remote user.

Referring to claim 70, which is representative of claims 63 and 77, a means for checking whether a document is tagged is explained by Zhao et al in column 8, lines 4-5 by the watermark (corresponding to a tag) reader (123) of the copy client. Merging the document with the watermark information if the document is tagged is explained by Zhao et al in column 8, lines 5-9. Zhao et al explain that if the watermark (tag) is present, then it will be displayed by the copy client. Zhao et al also explain that the copy client can perform many functions including displaying or printing a digital representation in column 6, lines 44-47. Thus, if the watermark (tag) is determined to be present in a digital representation, then the representation will be displayed (or printed) with the watermark by the copy client.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 5, 24, 43, 64, 71, and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al in view of Houser et al (U.S. Patent No. 5,606,609).

Referring to claim 24, which is representative of claims 5 and 43, a means for checking whether the document is digitally signed is not explicitly explained by Zhao et al. However, Houser et al do explain verifying a document by checking whether the document is digitally signed in column 3, line 61 to column 4, line 2. The sending of the merge command being based on the document being digitally signed is not explicitly explained by Zhao et al. However, Houser et al explain in column 6, lines 24-40 that if a digital signature is correctly detected then a document will be printed with a electronic watermark. The watermark further enhances the security of the document by including information related to the signator and the document in the print out of the document. Houser et al also explain the watermark can be made imperceptible to inhibit subsequent modification of the watermark. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a watermark in a document, as done in the systems of Zhao et al and Houser et al, when a digital signature is detected in order to improve the security and ownership of the original electronic document.

Referring to claim 71, which is representative of claims 64 and 78, a means for checking whether a document is digitally signed is not explicitly explained by Zhao et al. However, Houser et al do explain verifying a document by checking whether the document is digitally signed in column 3, line 61 to column 4, line 2. Merging the document with the watermark information if the document is digitally signed is not explicitly explained by Zhao et al. However, Houser et al explain in column 6, lines 24-40 that if a digital signature is correctly detected then a document will be printed with a electronic watermark. The watermark further

enhances the security of the document by including information related to the signator and the document in the print out of the document. Houser et al also explain the watermark can be made imperceptible to inhibit subsequent modification of the watermark. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a watermark in a document, as done in the systems of Zhao et al and Houser et al, when a digital signature is detected in order to improve the security and ownership of the original electronic document.

8. Claims 13-14, 32-33, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al in view of well-known prior art.

Referring to claim 32, which is representative of claims 13 and 51,

- i. A means for scanning the document is not explicitly explained by Zhao et al. However, scanning an analog representation of a document in order to obtain a digital representation is well known in the art (official notice). Such scanning is required in order to be able to store the document on a copy server and embed a digital watermark into the document, as done by Zhao et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to scan a document in order to obtain a digital representation of the document.
- ii. A means for transmitting the document to the document manager is illustrated by Zhao et al in figure 1 by the copy server 103(j) and the work storage 105. The copy server (corresponding to the document manager) will extract a document from the work storage.

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Referring to claim 33, which is representative of claims 14 and 52, transmitting at least a portion of the watermark information to the document manager is explained by Zhao et al in column 3, lines 38-58. Zhao et al illustrate in figure 2 that the watermarked originals received by the copy server (corresponding to the document manager) contain at least one public watermark (203) and one owner identification watermark (205(1)).

9. Claims 19, 38, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao et al in view of Stefik et al (U.S. Patent No. 6,233,684).

Referring to claim 38, which is representative of claims 19 and 57, adjusting the image density of the watermark information so that the image density of the watermark information is lower than the image density of the document is not explicitly explained by Zhao et al. Zhao et al do explain that the watermark should be invisible or inaudible when the digital representation is decoded in column 1, lines 47-51. Stefik et al explain that perceptually adaptive watermarks are well known in the art in column 2, lines 41-45. The intensity (corresponding to the image density) of the Digimarc watermark is explained to be varied for each digital representation in order to remain invisible in both flat (low frequency) and detailed areas of an image (high frequency). In order for the watermark to remain invisible in the Digimarc system, it is inherent that its varied intensity would have to be lower than the intensity of digital representation it is being embedded into. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust an image density for a watermark so that the density of the watermark information is lower than the image density of a document so that the watermark is imperceptible in the document.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Saito (U.S. Patent No. 6,002,772) – To exhibit using cryptography and watermarking in order to prevent piracy of electronic data as explained in the abstract and illustrated in figure 1.

Zhao et al (U.S. Patent No. 6,487,301) – To exhibit embedding a digital signature as a watermark in a digital representation as explained in the abstract and illustrated in figures 1 and 4.

Adams (U.S. Patent No. 6,351,815) – To exhibit watermarking a document in order to control access to a document as explained in the abstract and illustrated in figure 7.

Rice et al (U.S. Patent App. Pub. No. 2002/0049614 A1) – To exhibit using digital signatures in order to provide secure access to a document and printing the document with a watermark if the signature is determined as explained in the abstract.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein Akhavannik whose telephone number is (703)306-4049. The examiner can normally be reached on M-F 8:30-5:00.

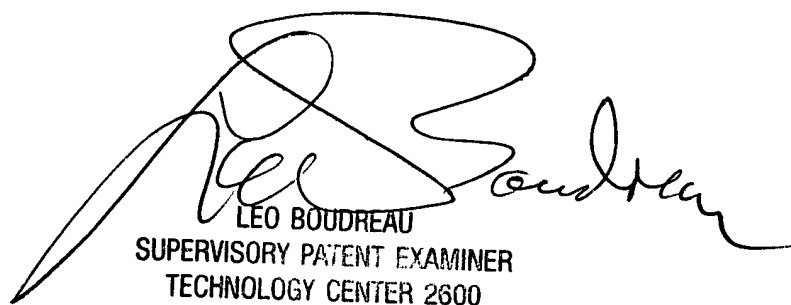
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H. Boudreau can be reached on (703)305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Hussein Akhavannik
November 14, 2003

H.A.



LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
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